

NOAA CLIMATE AND GLOBAL CHANGE
GLOBAL CARBON CYCLE (GCC) PROGRAM
CLIMATE PROGRAM OFFICE
FY2007 Information Sheet

IMPORTANT DATES:

Letters of intent: Due by E-mail or fax by May 30, 2006

Full proposals: Due by July 25, 2006

Information on proposal submission procedures, contact information, etc. can be found in the 2007 Climate and Global Change announcement

http://www.cpo.noaa.gov/index.jsp?pg=opportunities/opp_index.jsp&opp=grants

The Global Carbon Cycle (GCC) Program in the Climate Program Office focuses on three main goals:

1. Quantifying spatial patterns and variability of carbon sources and sinks on global to regional scales;
2. Documenting the fate of anthropogenic CO₂ in the atmosphere and oceans; and
3. Improving future climate predictions by incorporating a dynamic understanding of the carbon cycle into models.

To achieve these goals, GCC relies on oceanic and atmospheric observations, process-oriented field studies, and modeling. Information and current project abstracts can be found at: http://www.climate.noaa.gov/cpo_pa/gcc/

FY2007 Summary:

In FY2007, GCC is soliciting projects in the following areas:

- A) Air-Sea CO₂ Exchange Study
- B) Carbon Budgets for North America, Adjacent Coastal Margins and Open Ocean Basins
- C) Data Synthesis, Modeling, and Interpretative Studies
- D) Climate Process and Modeling Team

A) Air-Sea CO₂ Exchange Study

Proposals will be considered for an interagency field study of air-sea CO₂ flux in the Southern Ocean (SO) aboard the NOAA SHIP RONALD H. BROWN during boreal winter 2007-2008 focusing on understanding a) the kinetics of gas exchange and the factors controlling it, and b) the physical and biogeochemical factors controlling the air-

sea pCO₂ difference, in the context of developing parameterizations for those factors that can ultimately be remotely sensed to determine regional and global air-sea CO₂ fluxes. The Southern Ocean Gas Exchange Experiment (SO GasEx) will take place in the Atlantic sector of the Southern Ocean. Available shipboard measurements include: salinity, temperature, oxygen, nitrate, fluorescence and pCO₂ from an uncontaminated high capacity bow intake line at nominally 5-m depth, and surface currents using a bow mounted ADCP (<http://www.moc.noaa.gov/rb/index.html>). Core meteorological measurements will include wind speed, wind direction, precipitation, relative humidity, infrared and visible radiation. Fluxes of other gases, such as DMS, that contribute to the understanding of the processes controlling air-sea fluxes of carbon dioxide will also be considered. Projects should be proposed separately, but may refer to other supporting or complementary efforts. Projects for cruise coordination, hydrography and logistics support should be proposed separately from scientific projects. Investigators should make clear any special platform needs, i.e. ship modifications, additional boats, or specific sampling requirements, in a separate section. Investigators are encouraged to contact the appropriate program managers at NOAA, NSF and NASA regarding funding opportunities. For further information, please visit (http://www.climate.noaa.gov/index.jsp?pg=/cpo_pa/cpo_pa_index.jsp&pa=gcc&sub=so_co2.jsp)

B) Carbon Budgets for North America, Adjacent Coastal Margins and the Open Ocean

In FY2007, GCC is soliciting proposals of intensive, short-term process and synthesis studies to understand better the role of North America, Adjacent Coastal Margins, and the Open Ocean Basins in the global carbon cycle. Areas of focus should identify important processes to establish the large-scale patterns of carbon uptake or release. Applications of new technologies to measure the coastal, regional, and global carbon system, including technology and sensor development and analytical techniques are included.

C) Data Synthesis, Modeling, and Interpretive Studies

In FY2007, GCC is seeking studies using empirical data, synthesized datasets, existing models, data assimilation techniques, and theory to advance the ability to quantify spatial patterns and variability of carbon sources and sinks between the land-ocean, ocean-atmosphere, and atmosphere-land at regional to global scales; document the fate of anthropogenic CO₂ in the atmosphere and oceans; and improve future climate predictions by incorporating a dynamic understanding of the carbon cycle into models.

D) Climate Process and Modeling Team

GCC is interested in supporting a Climate Process and Modeling Team (CPT) to improve coordination between research at modeling centers and the broader scientific community. The CPT should be composed of a small group of observational, theoretical, and small-scale modeling scientists from the community and scientists at GFDL to working closely together to improve parameterizations of a particular process in one or more climate models.